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(71) Applicant (for all designated States except US): PHILIP MORRIS INCORPORATED [US/US]; 120 Park Avenue, New York, NY 10017 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): KOLLER, Kent, B. [US/US]; 8401 Kintail Drive, Chesterfield, VA 23838 (US); WRENN, Susan, E. [US/US]; 12130 Ivy Mill Road, Chesterfield, VA 23832 (US); HOUCK, Willie, G., Jr. [US/US]; 7753 Lake Forrest Drive, Richmond, VA 23235 (US); PAINE, John, B., III [US/US]; 13630 Trilithon Road, Midlothian, VA 23235 (US).

(74) Agent: SKIFF, Peter, K.; Burns, Doane, Swecker & Mathis, L.L.P., P.O. Box 1404, Alexandria, VA 22313-1404 (US).

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(54) Title: FILTER FOR SELECTIVE REMOVAL OF A GASEOUS COMPONENT

(57) Abstract

A filter such as an air having a reagent which chemically reacts with and removes a gaseous component of an air stream. The reagent contains functional groups covalently bonded to a non-volatile inorganic substrate which is incorporated in the filter. The filter can remove gaseous components such as aldehydes. Preferred functional groups are 3-aminopropylsilyl groups covalently bonded to silica gel (APS silica gel). The reagent can be contained in a space in the filter or incorporated in one or more filter elements. The reagent can be part of or coated on paper such as filter paper or incorporated in non-paper filter elements formed from fibrous materials such as cellulose acetate or polypropylene fibers. Other preferred reagents include aminoethylaminopropylsilyl silica gel (AEAPS) and aminoethylaminoethylaminopropylsilyl silica gel (AEAEAPS).